

Figure 1

M K L P V R L L V L M F W I P A
ATG AAG TTG CCT GTT AGG CTG TTG GTG CTG ATG TTC TGG ATT CCT GCT
S S D
TCC AGC GAT (-1 to -19, leader)

D V L M T Q T P L S L P V S L G
GAT GTT TTG ATG ACC CAA ACT CCA CTC TCC CTG CCT GTC AGT CTT GGA
D Q A S I S C
GAT CAA GCC TCC ATC TCT TGC (1-23, Frame work 1)

R S S Q S I V H S N G N T Y L E
AGA TCT AGT CAG AGC ATT GTA CAT AGT AAT GGA AAC ACC TAT TTA GAA
(24-39, CDR 1)

W Y L Q K P G Q S P N L L I Y
TGG TAC CTA CAG AAA CCA GGC CAG TCT CCA AAC CTC CTG ATC TAC
(40-54, Frame work 2)

F V S N R F S
TTT GTT TCC AAC CGA TTT TCT (55-61, CDR 2)

G V P D R F S G S G S G T D F T
GGG GTC CCA GAC AGG TTC AGT GGC AGT GGA TCA GGG ACA GAT TTC ACA
L K I S R V E A E D L G V Y Y C
CTC AAG ATC AGC AGA GTG GAG GCT GAG GAT CTG GGA GTT TAT TAC TGC
(62-93, Frame work 3)

F Q G S H V P W T
TTT CAA GGT TCA CAT GTT CCG TGG ACG
(94-102, CDR 3)

F G G G T K L E I K
TTC GGT GGA GGC ACC AAG CTG GAA ATC AAA
(103-112, Frame work 4)

R A D A A P T V S I F P P
CGG GCT GAT GCT GCA CCA ACT GTA TCC ATC TTC CCA CCA

S S K L G
TCC AGT AAG CTT GGG (Constant region)

24

Figure 2

M A V L G L L F C L V T F P S C
ATG GCT GTC TTG GGG CTG CTC TTC TGC CTG GTG ACA TTC CCA AGC TGT
V L S
GTC CTG TCC (-1 to -19, Leader)

Q V Q V K E S G P F L V P P S Q
CAG GTG CAG GTG AAG GAG TCA GGA CCT TTC CTG GTG CCC CCC TCA CAG
S L S I T C T V S G F S L T
AGC CTG TCC ATC ACA TGC ACT GTC TCA GGG TTC TCA TTA ACC
(1-30, Frame work 1)

T Y G V S
ACC TAT GGT GTA AGC (31-35, CDR 1)

W I R Q P P G K G L E W L G
TGG ATT CGC CAG CCT CCA GGA AAG GGT CTG GAG TGG CTG GGA
(36-49, Frame work 2)

A I W G D G T T N Y H S A L I S
GCA ATT TGG GGT GAC GGG ACC ACA AAT TAT CAT TCA GCT CTC ATA TCC
(50-65, CDR 2)

R L S I S K D N S K S Q V F L K
AGA CTG AGC ATC AGC AAG GAT AAC TCC AAG AGC CAA GTT TTC TTA AAA
L N S L Q T D D T A T Y Y C A K
CTG AAC AGT CTG CAA ACT GAT GAC ACG GCC ACG TAC TAC TGT GCC AAA
(66-97, Frame work 3)

L G N Y D A L D W
CTG GGT AAC TAC GAT GCT CTG GAC TAC
(98-106, CDR 3)

W G Q G T S V T V S S
TGG GGT CAA GGA ACC TCA GTC ACC GTC TCC TCA
(107-117, Frame work 4)

A K T T P P P V Y P L V P G S L
GCC AAA ACG ACA CCC CCA CCC GTC TAT CCA TTG GTC CCT GGA AGC TTG GG
(Constant region)

000000-04560

Figure 3(A)

1A7:	1	DVLMTQTPLSLPVSLGDQASISCRSSQSIVHSNGNTYLEWYLQKPGQSPNLLIYFVSNRF	60
1	1	.....K....K.....	60
2	1	.....K....K.....	60
3	1	..V.....K....K.....	60
4	1	.....K....K.....	60
5	1	.....K....K.....	60
6	1	.....K....K.....	60
7	1	.....K....K.....	60
8	1	.....X..K....K.....	60
9	5	.....S...F.....K....K.....	64
10	1	.....K....K.....	60
11	1	.....K....K.....	60
12	20	.....K....K.....	79
13	1	.....K....K....L	60
14	1	.....K....K.....	60
15	5	.....S...F.....K....K.....	64

1A7:	61	SGVPDRFSGSGGTDFTLKISRVEAEDLGVIYCFQGSHVPWTFGGGTKLEIK	112
1	61	.....	112
2	61	.....	112
3	61	.....	112
4	61	.....	111
5	61	...X.....	112
6	61	.....Y.....	112
7	61	.....C.....	111
8	61	.....	111
9	65	.....T.....	116
10	61	.....R.....Y.....	112
11	61	.....R.....	112
12	80	.....Y...S.....	131
13	61	.....Y.....	112
14	61	.....T.....W.....Y.....	112
15	65	.....Q.....T.....	116

09293533 041599

Figure 3(B)

1A7:	1	QVQVKESGPFLVPPSQSL SITCTVSGFSLTTYGVSWIRQPPGKGLEWLGAIWGDGTTNYH	60
1	1	.G..A.....S....V.....V....S....	52
2	1	...LQ...G..A.....S..IT.V.....V:..N:..	60
3	20	...L....G..A.....G...N.V.....T...N.S.D.N	79
4	1	...L..T..G..A.....S...H.V.....VV..S..S...N	60
5	1	...L....G..A.....S...H.V.....V..AG.S...N	60
6	1	...L....G..A.....S...H.V.....V..AG.S...N	60
7	1	...L....G..A.....P..S...D.V.....V...G.S...N	60
8	23	...LQ...G..A.....G...N.V.....M....N.D.N	82
9	1	...L....G..A.....G...N.V.....M....N.D.N	60
10	133	...LQ...G..A.....G...N.V.....M....N.D.N	192
11	20	...L....G..A.....G...N.V.....M....N.D.N	79
12	1	...L....G..A.....SR.S.H.V.....M...G.N.D.N	60
13	21	..HL....V..A.....N...H.V.....V..AG.N...N	80
14	23	...LQ...G..A.....G...N.V.....M....N.D.N	82
15	1	...LQ...G..A.....G...N.V.....M....N.D.N	60

1A7:	61	SALISRLSISKDNSKSQVFLKLSLQTD TATYYCAKL-----GN YDALDWWGQGTSVTVSS	117
1	53	.....P-----YDYExxxxx.Y....TL..	109
2	61	.....x-----xxxxxxx.K.Y.....	120
3	80	.T.K...T.T.....M.....R...SVSIYYGRSDK.FT..Y.....	144
4	61	...K.....M.....M...Rx-----xx.D.Y.M.Y.....	119
5	61	...M.....M.....M...Rx-----xxxxxx.Y.M.Y.....	120
6	61	...M.....M.....M...Rx-----xxxx.Y.M.Y.....	118
7	61	...M.....M...X...M...xx-----xxx.X.Y.M.Y.....	119
8	83	...K.....M...H...R...RE-----RDYR..Y....T....	138
9	61	...K.....M...H...R...RE-----RDYR..Y....TL....	116
10	193	...K.....M...H...R...RE-----RDYR..Y....T....	248
11	80	...K.....M...H...R...RE-----RDYR..Y....TL....	135
12	61	...K.....M.....M...RD-----GYDx.M.Y.....	117
13	81	...M.....M...I...I:..x-----xxxxx.Y.M.Y.....	139
14	83	...K.....M...H...R...RE-----RDYR..Y....T....	138
15	61	...K.....M...H...R...RE-----RDYR..Y....T....	116

Figure 3(C)

		*****	*****	
VL consensus:	1	DVLMTQTPLSLPVSLGDQASISCRSSQSI	VHSNGNTYLEWYLQKKGQSPKLLIYFVSNRF	60
1A7:	1	.....	P....N.....	60

		*	*****	
VL consensus:	61	SGVPDRFSGSGGTDFTLKISRVEAEDLG	VYYCFQGSHPWTFGGGTKLEIK	112
1A7:	61	.....		112

		*****	*****	
VH consensus:	1	QVQLKESGPGLVAPSQSL	SITCTVSGFSLTSYGVHWVRQPPGKGLEWLGVIWGDGSTNYN	60
1A7:	1	...V.....F..P.....	T...S.I.....A.....T...H	60

		*****	*****	
VH consensus:	61	SALKSRLSISKDNSKSQVFLKMNSLQ	TDDTARYYCARExxxxYYAMDYWGQGSVTVSS	119
1A7:	61	...I.....L.....	T....KL--GN.D.L.W.....	117

965110 1556660

Figure 4

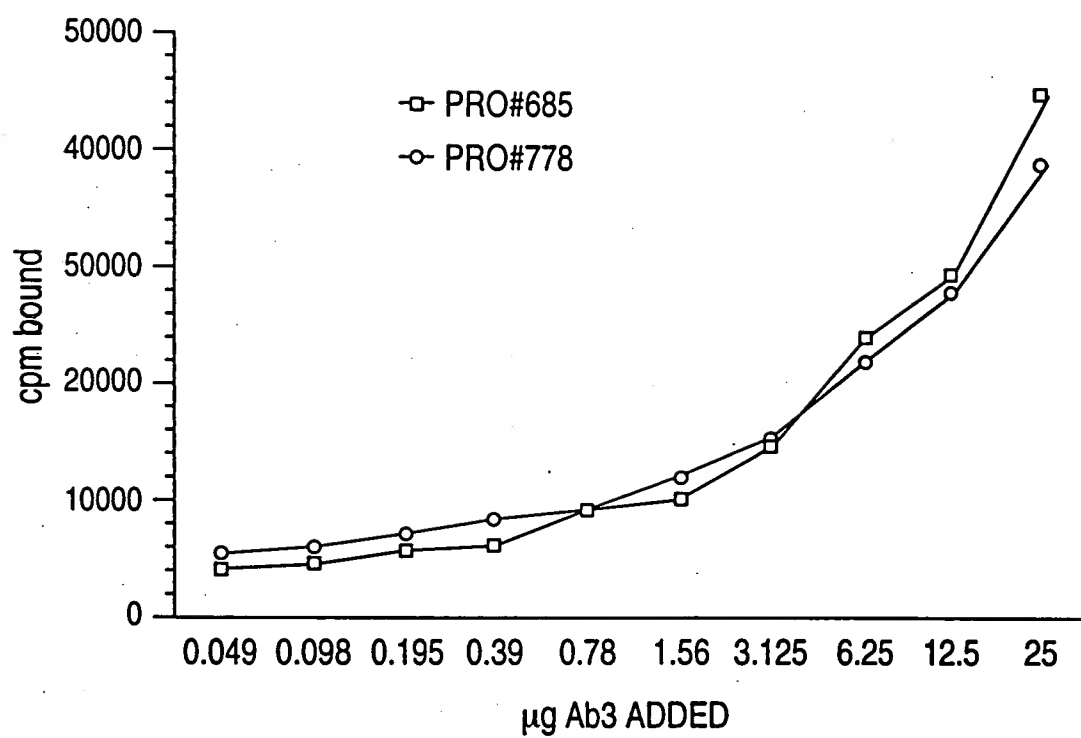


Figure 5

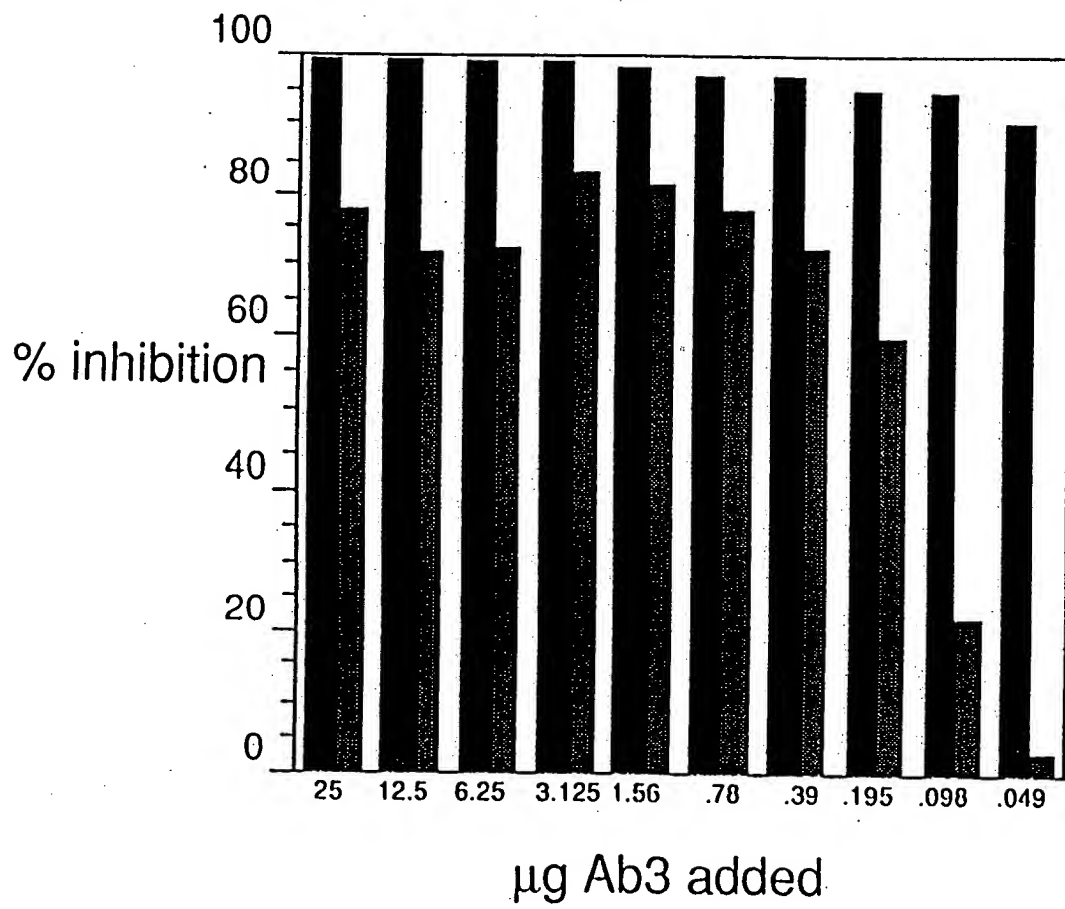


Figure 6

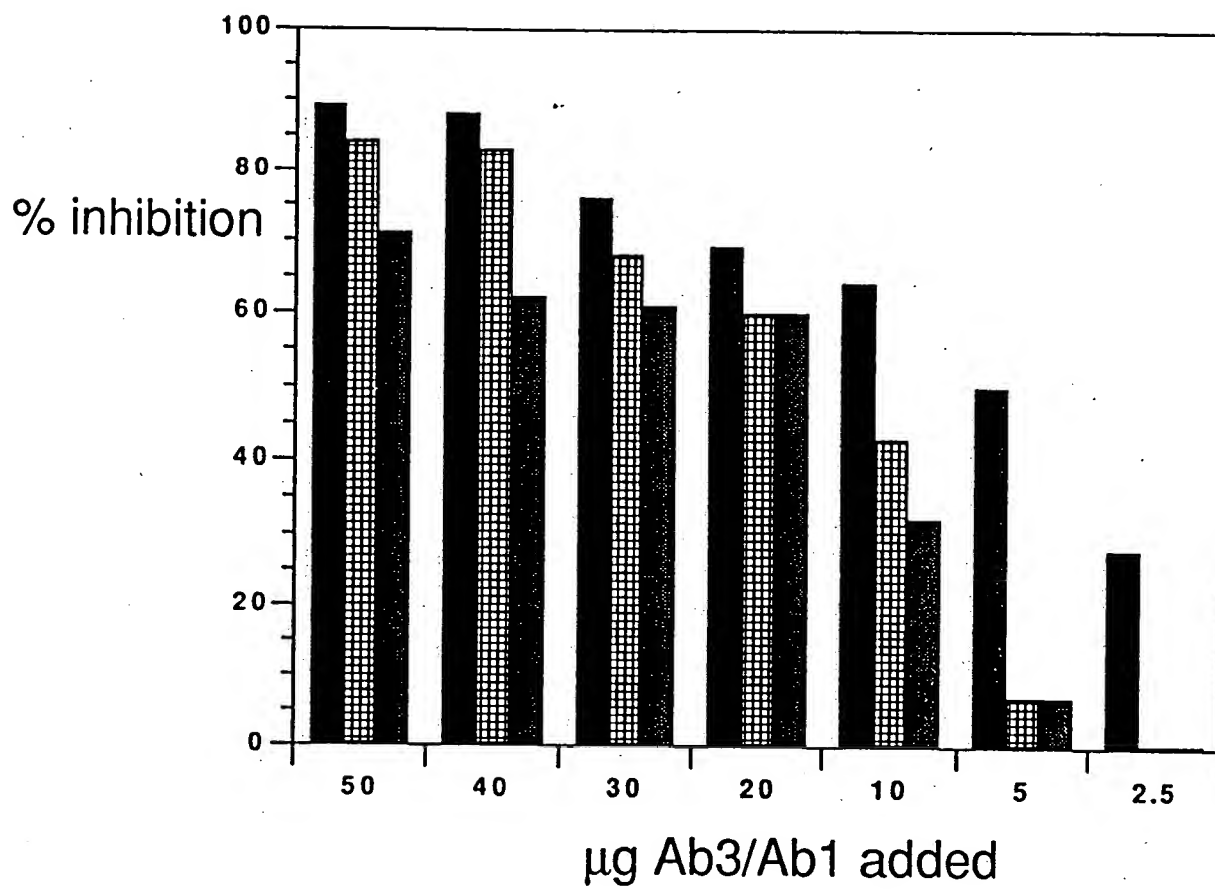


Figure 7(A)

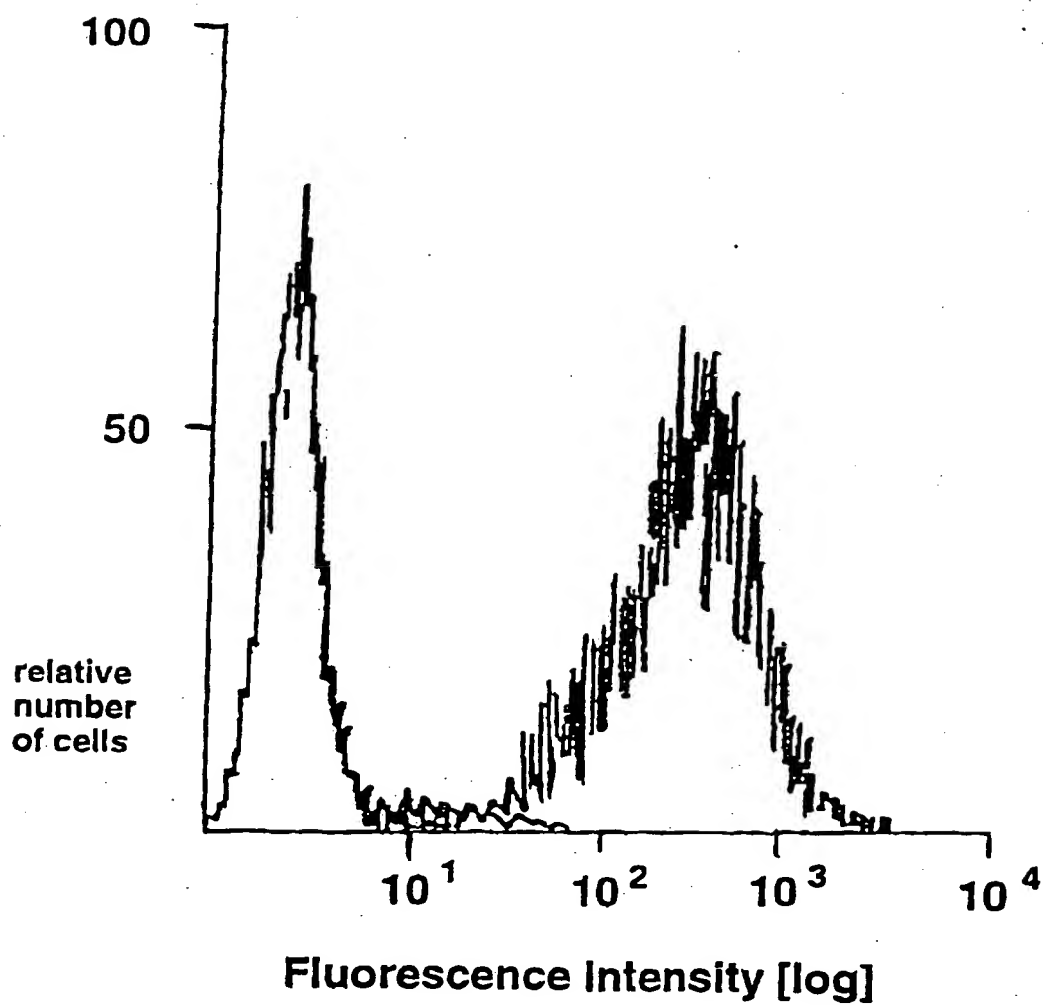


Figure 7(B)

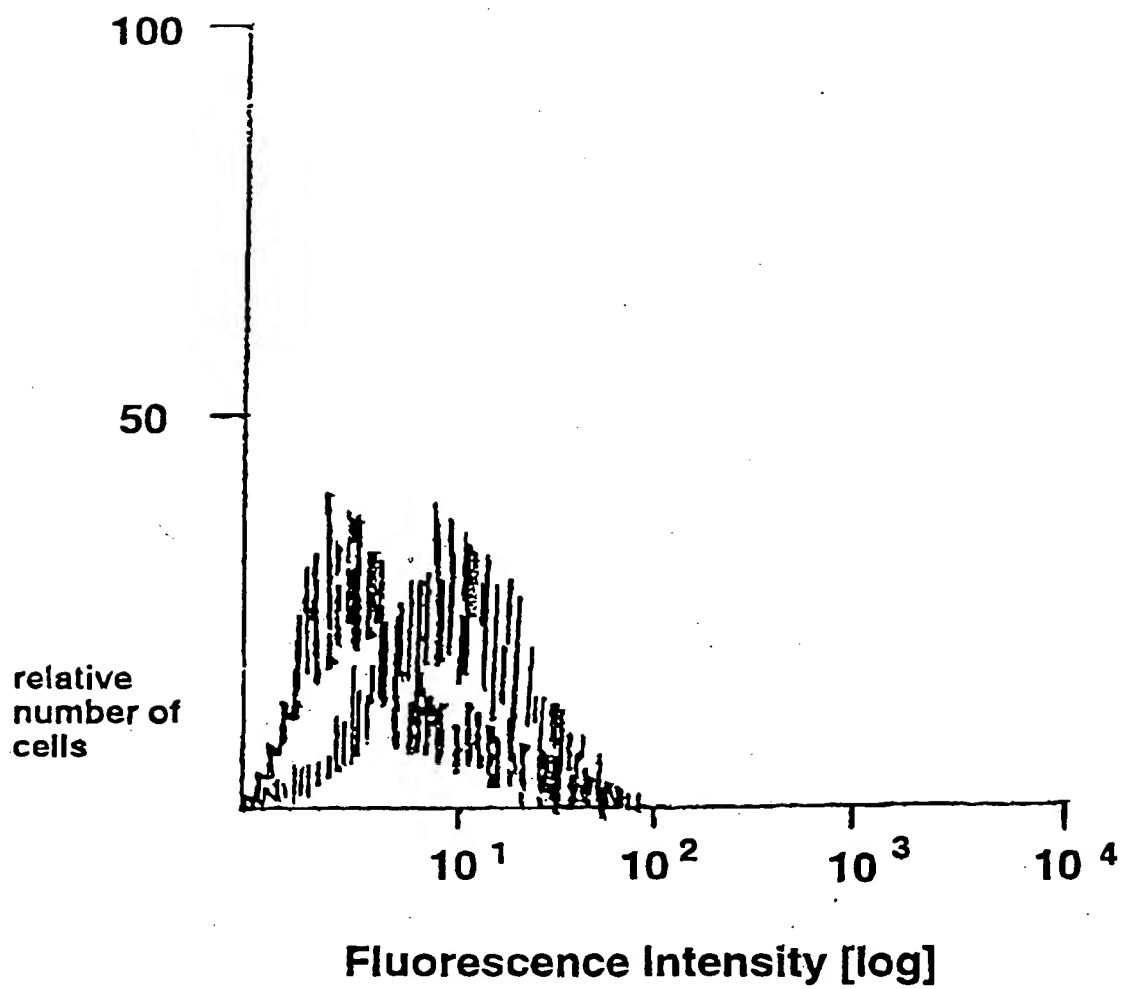


Figure 7(C)

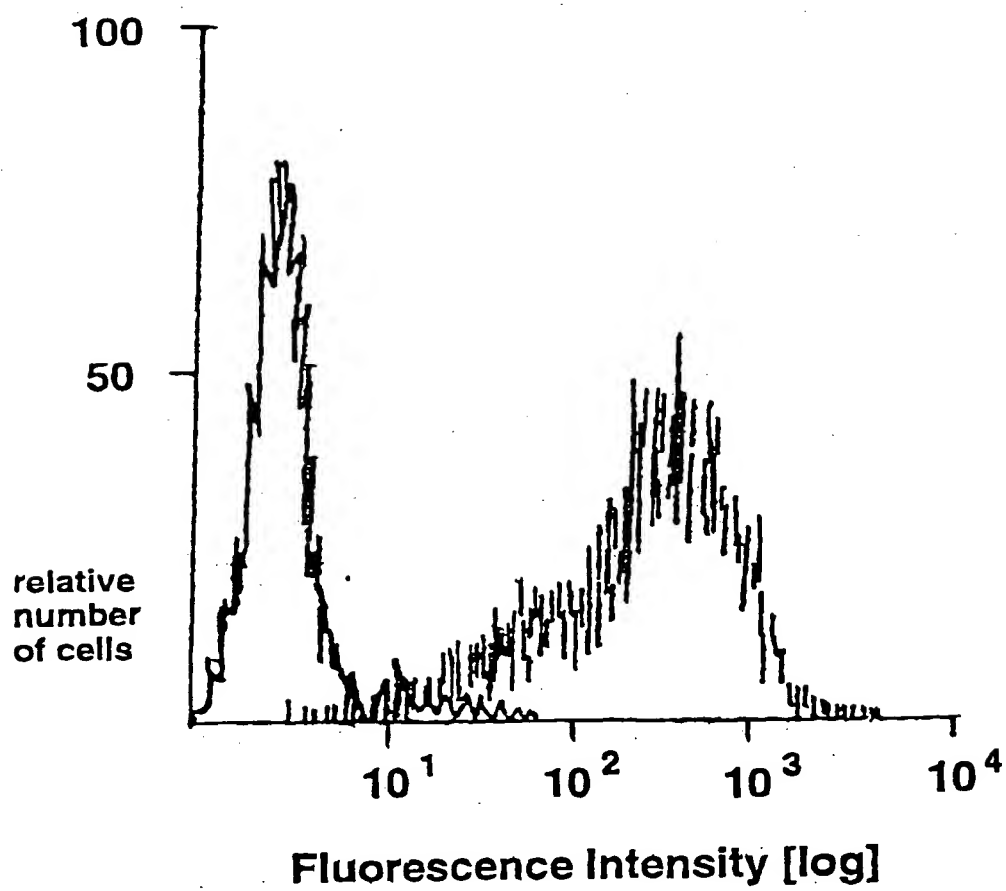
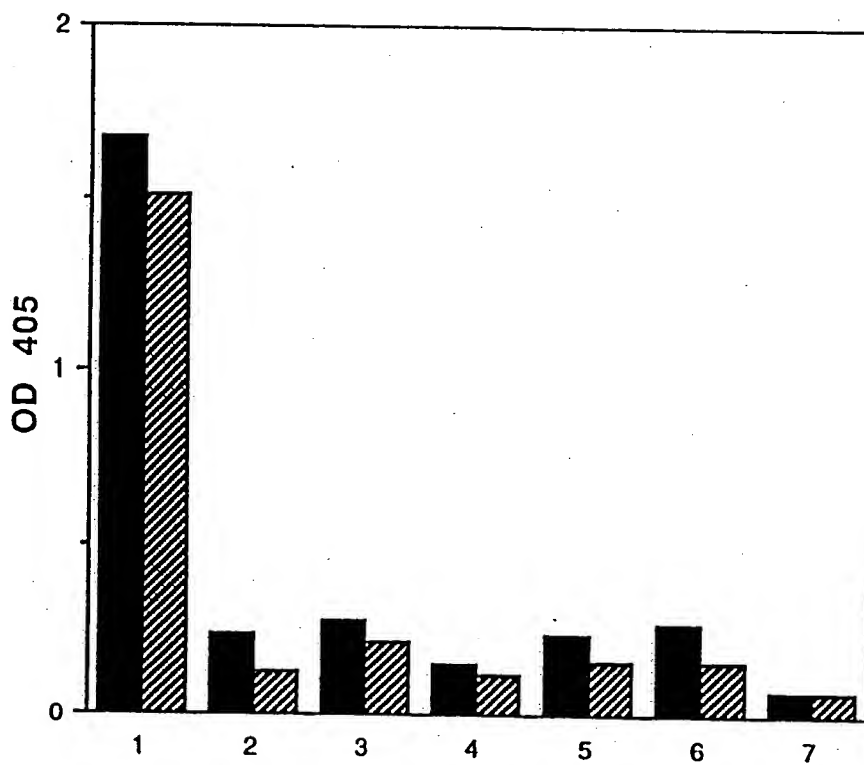


Figure 8



005740-8856260

Figure 9

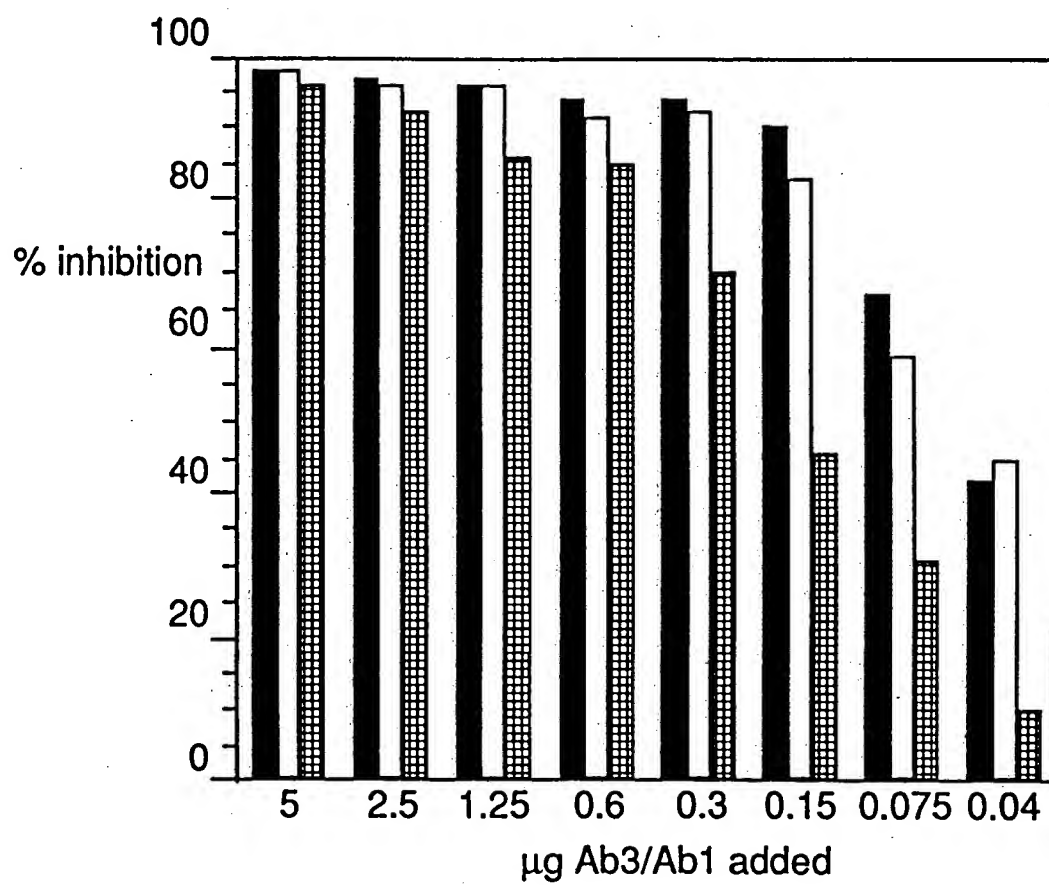
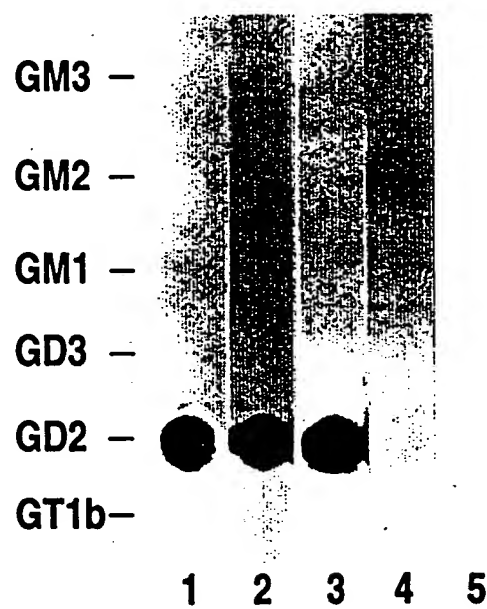
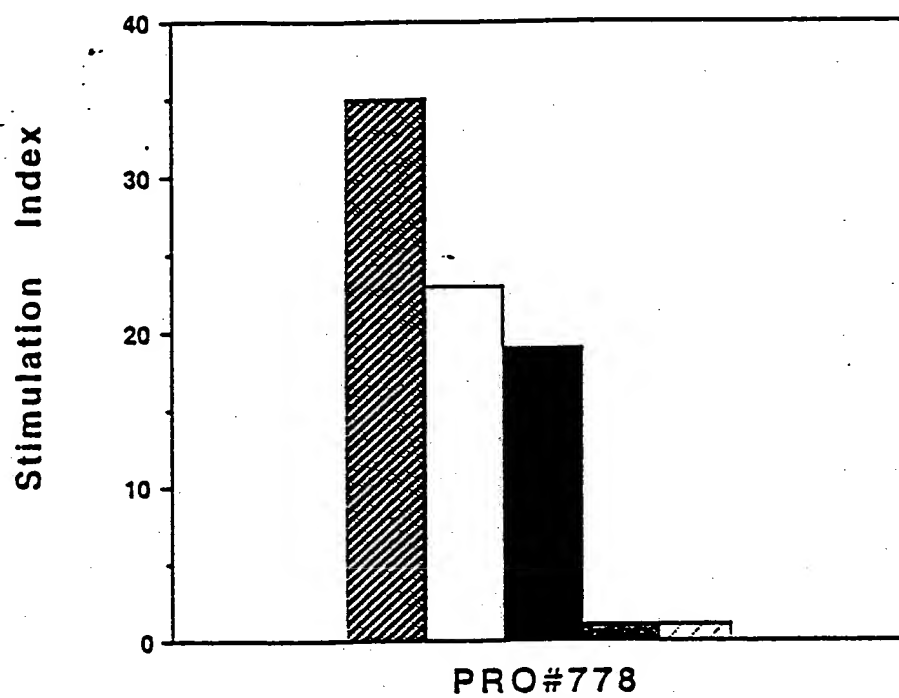


Figure 10



005140-2256260

Figure 11



000000-041599

Figure 12

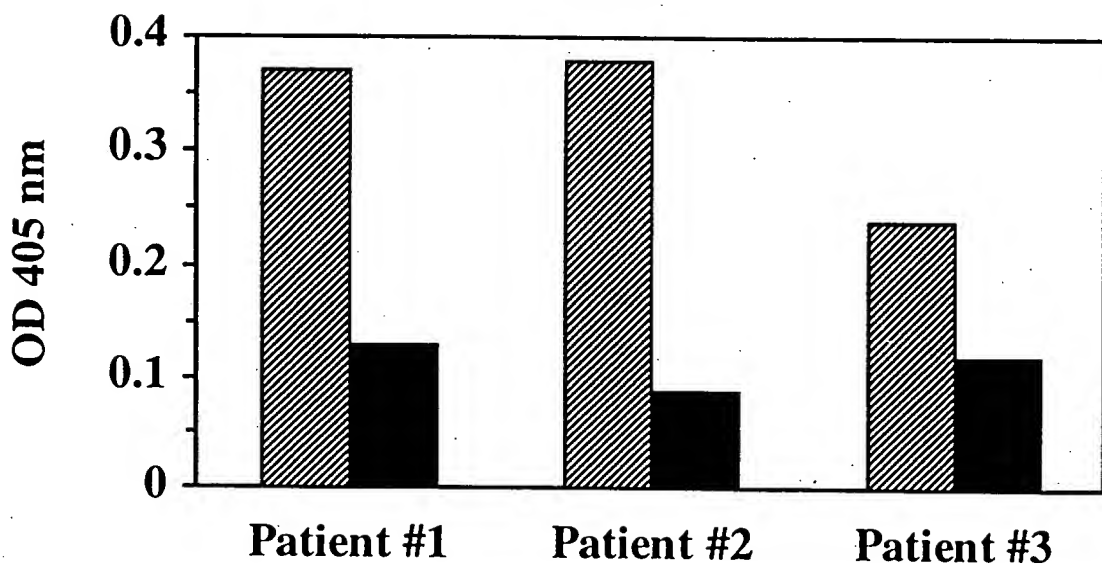
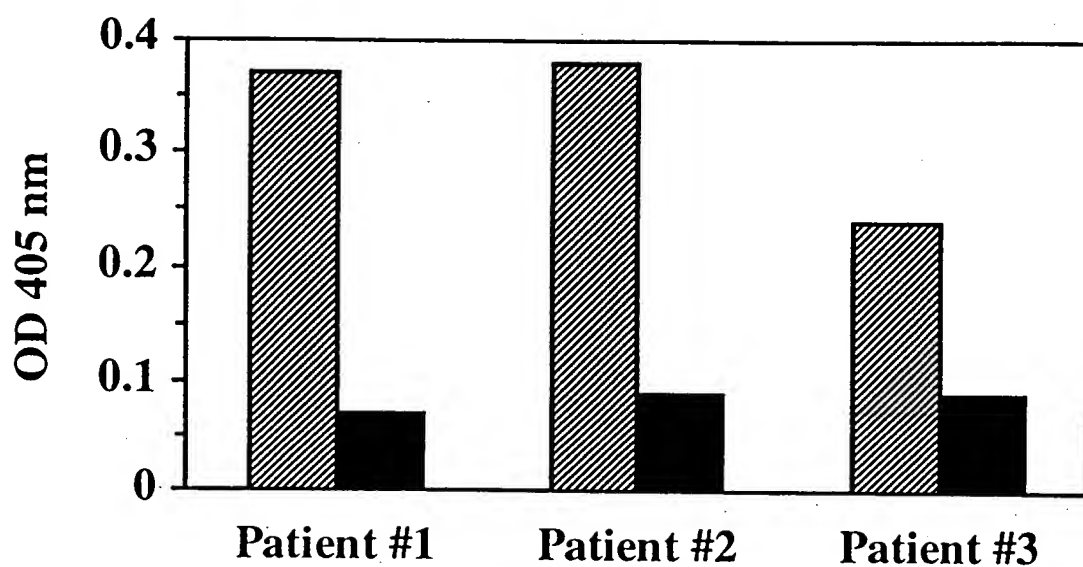


Figure 13

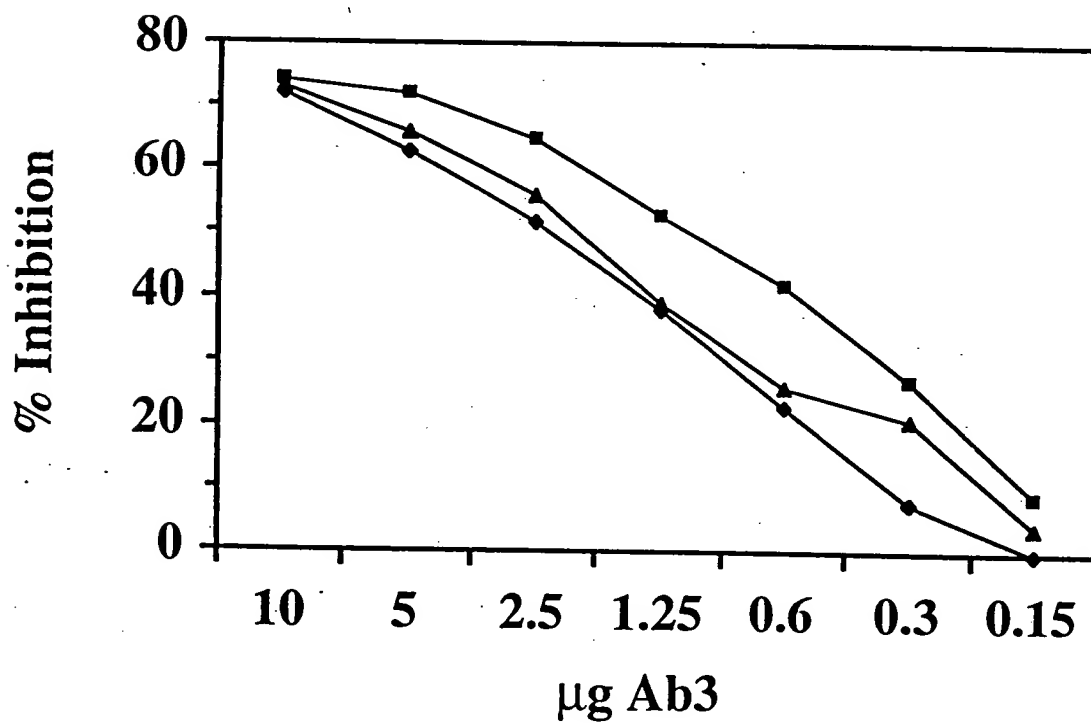
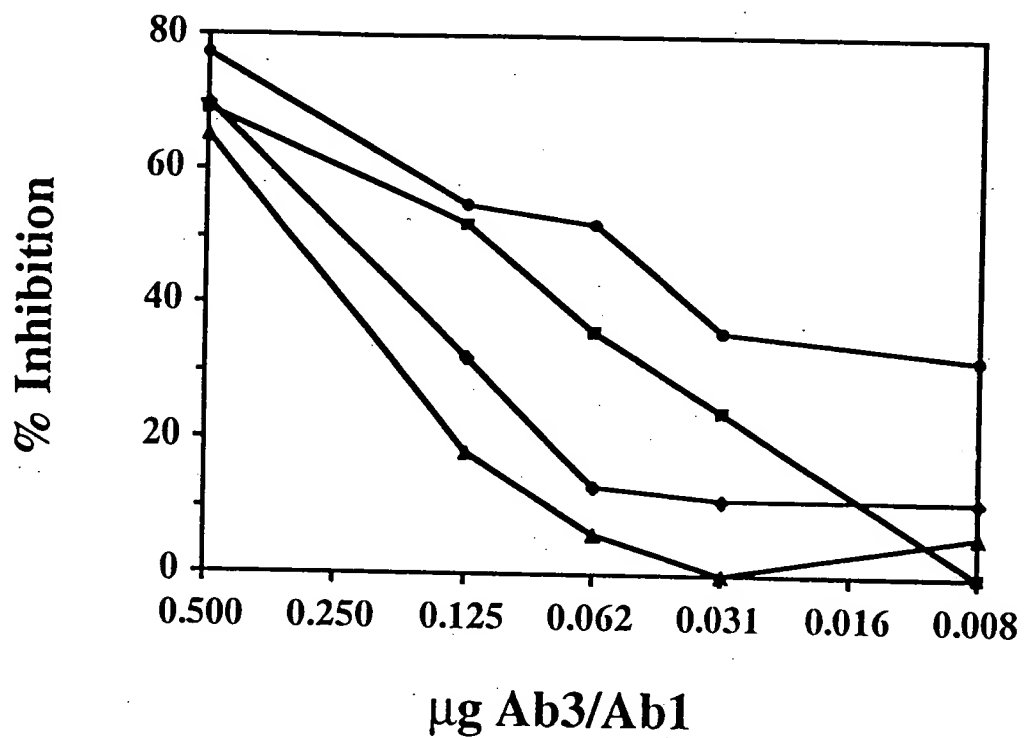


Figure 14

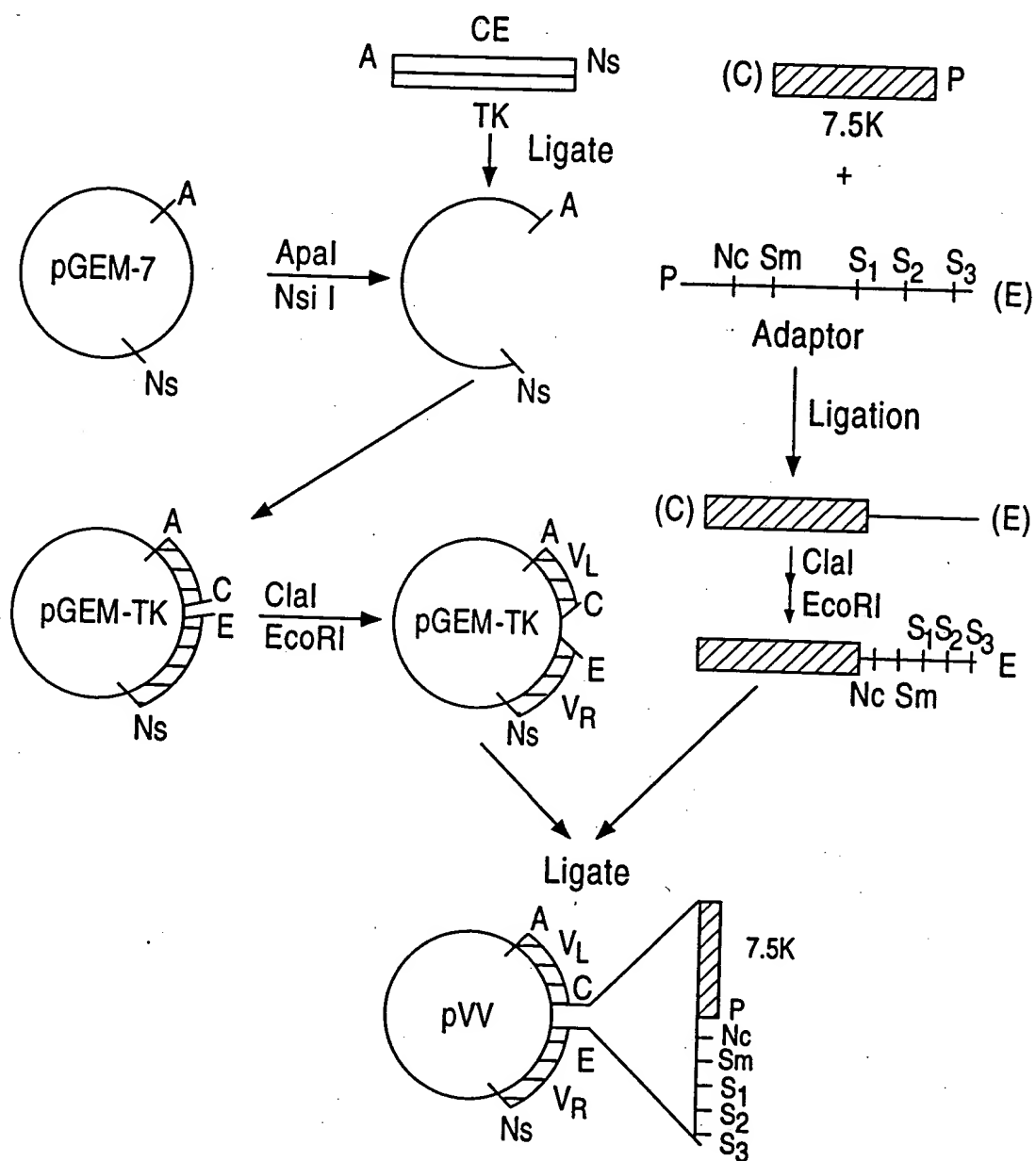
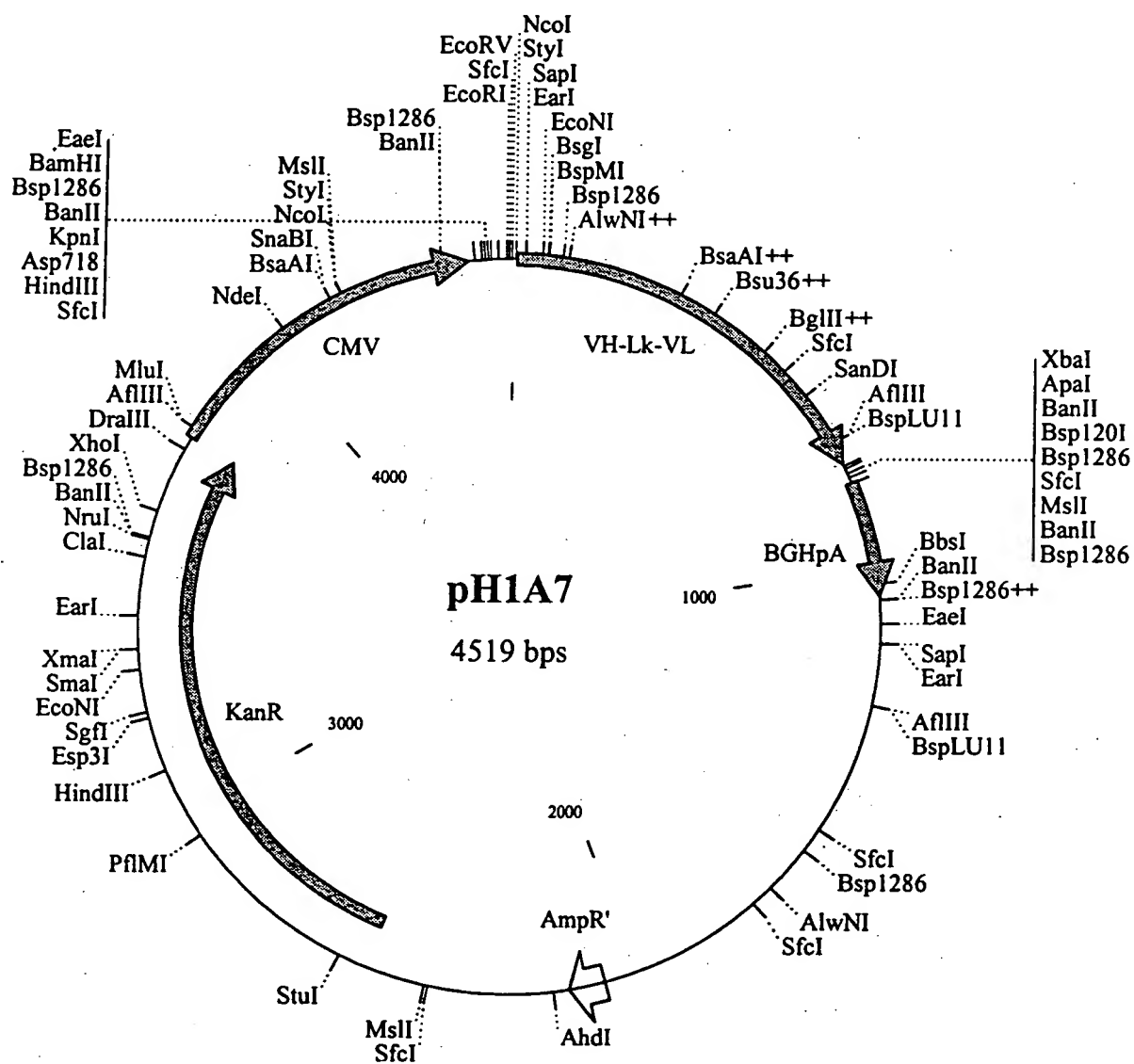


Figure 15

GCCGATATCACC!ATGGCTGTCTTGGGGCTGCTCTTCTGCCTGGTGACATTCCCAAGC
TGTGTCCTGTCCCAGGTGCAGGTGAAGGAGTCAGGACCTTTCCTGGTGCCCCCCTCA
CAGAGCCTGTCCATCACATGCACTGTCTCAGGGTTCTCATTAACCACCTATGGTGTA
AGCTGGATTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGCAATTTGGGG
TGACGGGACCACAAATTATCATTCAGCTCTCATATCCAGACTGAGCATCAGCAAGGA
TAACTCCAAGAGCCAAGTTTTCTTAAAACTGAACAGTCTGCAAACCTGATGACACGGC
CACGTACTACTGTGCCAAACTGGGTAACACGATGCTCTGGACTACTGGGGTCAAGG
AACCTCAGTCACCGTCTCCTCAGGGGGAGGTGGCTCGGGCGGTGGCGGCTCGGGTGG
CGGCGGATCCGATGTTTTGATGACCCAAACTCCACTCTCCCTGCCTGTCAGTCTTGA
GATCAAGCCTCCATCTCTTGAGATCTAGTCAGAGCATTGTACATAGTAATGGAAAC
ACCTATTTAGAATGGTACCTACAGAAACCAGGCCAGTCTCCAAACCTCCTGATCTAC
TTTGTTCCTCAACCGATTTTCTGGGGTCCCAGACAGGTTCAAGTGGCAGTGGATCAGGG
ACAGATTTCACTCAAGATCAGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTAC
TGCTTTCAAGGTTACATGTTCCGTGGACGTTCCGGTGGAGGCACCAAGCTGGAAATC
AAATAATCTAGAGATG

1	mavlgllfcl	vtfpscvlsq	vqvkesgpfl	vppsqslsit	ctvsgfslt
51	ygvswirqpp	gkglewlgai	wgdgttnyhs	alisrlsisk	dnsksqvflk
101	lnslqtddta	tycaklgny	daldywgqgt	svtvssgggg	sggggsgggg
151	sdvlmtqtpl	slpvslgdqa	siscrssqsi	vhsngntyle	wylqkpgqsp
201	nlliyfvsnr	fsgvpdrfsg	sgsgtdflk	isrveadlg	vyycfqgshv
251	pwtfgggtkl	eik			

Figure 16



005553-04159

Figure 17(A)

>gb|L22327|MUSIGKAVAA Mouse rearranged immunoglobulin kappa-chain mRNA V-J

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGTGGAGGCACCAAGCTGGAATCAAA 336
```

>gb|L18941|MUSIG4388 Mouse rearranged immunoglobulin light chain Ab438 mRNA V-J

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGTGGAGGCACCAAGCTGGAATCAAA 336
```

>gb|M34588|MUSIGKABR Mouse Ig kappa-chain mRNA V-J region, partial cds.

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTNCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTNATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGTGGAGGCACCAAGCTGGAATCAAA 336
```

>gb|M32857|MUSIGKCSP Mouse Ig rearranged kappa-chain mRNA V-region, partial

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGTGGAGGCACCAAGCTGGAATC 333
```

>gb|M83723|MUSIGKD2A Mouse monoclonal antiidiotypic antibody Ig kappa light

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCC 300
301 CGGACGTTCCGTGGAGGCACCAAGCTGGAATCAAA 336
```

>emb|Z22035|MOIGKVAH M.domesticus IgK variable region.

```
1 GATGTTGTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTCACTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCC 300
301 TGGACGTTCCGTGGAGGCACCAAGCTGGAATCAAA 336
```

66514-66560

Figure 17(B)

>gb|M34589|MUSIGKABS Mouse Ig kappa-chain mRNA V-J region, partial cds.

```
1 GATGTTTTGATGACNCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTNATCTACAAAGTTTCCAACCGATTT 180
181 TCTGGGGTCCCAGANAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGGTGGAGGCACCAAGCTGGAAATCAAA 336
```

>gb|M32858|MUSIGKCSO Mouse Ig rearranged kappa-chain mRNA V-region, partial

```
1 GATGTTTTGATGACCCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATTT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGGTGGAGGCACCAAGCTGGAAATC 333
```

>emb|X87231|MMKAPLI M.musculus mRNA for antibody light chain

```
89 GATGTTTTAATGACCCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 148
149 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAAACACCTATTTAGAATGG 208
209 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATTT 268
269 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 328
329 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 388
389 TGGACGTTCCGGTGGAGGCACCAAGCTGGAAATCAAA 424
```

>gb|U29428|MMU29428 Mus musculus anti-PC rearranged Ig kappa chain V-J region

```
13 GATGTTTTGATGACCCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 72
73 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAGTGGAAACACCTTTTGAATGG 132
133 TACCTGCAGAAACCAGGCCAGTCTCCAAAGCTCCTGATCTACAAAGTTTCCAACCGATTT 192
193 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 252
253 AGCAGGTTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTACATGTTCCG 312
313 TGGACGTTCCGGTGGAGGCACCAAGCTGGAAATCAAA 348
```

09293637-041599

Figure 18(A)

>gb|U01185|MMU01185 Mus musculus BALB/c anti-glycophorin A type N

```
1 CAGGTGCAGCTGACGAGTACAGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACATGCACCTGTCTCAGGGTTCTCATTAAACAGCTATGGTATAACCTGGGTTGCCAGCCT 120
121 CCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGACGGAAACACAAATTATCAT 180
181 TCAGCTCTCATATCCAGACTGAGCATCAGCAAGGATAACTCCAAGAGCCAAGTTTCTTA 240
241 AAACCTGAACAGTCTGCAAACTGATGACACAGCCACGTACTACTGTGCCAA 291
292 ----- 315
316 GCTAAGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 360
```

>gb|M26985|MUSIGH1PR Mus musculus productively rearranged IgH chain allele 1,

```
1 CAGGTGCAGCTGAAGGAGACAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACATGCACCTGTCTCAGGGTTCTCATTAAACAGCTATGGTGTACACTGGGTTGCCAGCCT 120
121 CCAGGAAAGGGTCTGGAGTGGCTGGTAGTGATATGGAGTGATGGAAGCACAACTATAAT 180
181 TCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACAGTCTCCAACTGATGACACAGCCATGTACTACTGTGCCAGAC 292
293 ----- 300
301 GGTGACTACTATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 357
```

>dbj|D17387|PVY1B Potato virus Y immunoglobulin gene for monoclonal antibody

```
58 CAGGTGCAGCTGAAGGAGTACAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 117
118 ACATGCACCTGTCTCAGGGTTCTCATTAAACAGCTATGGTGTACACTGGGTTGCCAGCCT 177
178 CCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGACGGGAGCACAAATTATCAT 237
238 TCAGCTCTCATATCCAGACTGAGCATCAGCAAGGATAACTCCAAGAGCCAAGTTTCTTA 297
298 AAACCTGAACAGTCTGCAAACTGATGACACAGCCACGTACTACTGTGCCAAGCATCTTGAC 357
358 TAC 360
361 TGGGGCCAAGGCACCACTCTCAGTCTCCTCA 393
```

>gb|M36228|MUSIGHAEI Mouse Ig heavy-chain mRNA V region, partial cds from

```
1 CAGGTGCAGCTGAAGGAGTACAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACTTGCACTGTCTCTGGGTTTTTCATTAAACAGCTATGGTGTACACTGGGTTGCCAGCCT 120
121 CCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGGTGAAGCACAAATTATAAT 180
181 TCGGCTCTCATGTCCAGACTGAGCATCAGCAAAGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGAGGGCATTAC 300
301 TACG 304
305 - 305
306 CTACTATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCC 354
```

>gb|L48671|MUSAB Mus musculus (cell line C3H/F2-22) chromosome 12 anti-DNA

```
1 CAGGTGCAGCTCAAGGAGTACAGGACCTGTCTCGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACTTGCACTGTCTCTGGGTTTTTCATTAAACAGCTATGGTGTACACTGGGTTGCCAGCCT 120
121 CCAGGCAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGGTGAAGCACAAATTATAAT 180
181 TCAGCTCTCATGTCCAGACTGAGCATCAGCAAAGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAAAC 292
293 ----- 304
305 ACAATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACNGTCTCCTCA 354
```

0929353-044509

>gb|M36217|MUSIGHADX Mouse Ig heavy-chain mRNA V region, partial cds.

1 CAGGTNCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCACCCCTCACAGAGCCTGTCCATC 60
61 ACATCGCACTGCTCTGGGTTCTCATATTACAGATATAGTGTACACTGGTGTGCCAGCACT 120
121 CCAGAAAGGGGCTCTGAGTGGCTGGGAATATATGGGGTGGTGGAAACACAGACTAAAT 180
181 TCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACACTGTCGCAAACTGATGACACAGCCATGTACTCTGTGCCAGAGATGGTTAC 300
361 TACGACTATGCTATGGACTACTGGGTGTCAGGAACCTCAGTCACCGTCTCC 351

>gb|M36217|MUSIGHADX Mouse Ig heavy-chain mRNA V region, partial cds.

1 CAGGTGCAGCTGAAGGAGTCAGGACCTGGCCCTGGTGGCGCCCTCACAGAGCCTGTCCAT 60
61 ACTTGCACTGTCTCTGGGTTTTCATTAACCAAGCTATGGTGTACATGGGTTCGCCAGCCCT 120
121 CCAGGAAGGGGTCTGGAGTGGCTGGGAGTATATGGGCTGGTGGGAAGCAAAATATAAT 180
181 TCGGCTCTCATGCCAGCTGAGCATCAGAAATACAACTCCAAGAGCCAAAGTTTCTTA 240
241 AAAATGAACAGTCTGCAAACCTGATGACACAGCCATGTACTACTGTGCCAGA 291
292 ----- 312
313 TACTATGCTATGGACTACTGGGCTCAGGAACCTCAGTCACCGTCTCC 360

>gb|J04609|MUSIGMAF Mus musculus IgH chain (anti-fluorescein antibody 18-2-3)

67 CACGTCACCTGAAGGAGTCAGGACCTGTCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 126
127 ACTTGCACTGTCTCTGGGTTTTCATTAACCAACTATGGTGACACTGGGTTCGCCAGCCT 186
187 CCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATGGGGTGCGAAACACAAATATAAT 246
247 TCAGCTCTCATGTCAGCACTGAGCATGACGAAATCAAGAGCAAGCTTTCTTA 306
307 AAAATGAACAGTCTGCAAAATTGATGACACAGCCATATACTACTGTGCCAAAC 358
359 ----- 375
376 TACTATGCTATGGACTATTGGGGTCAAGGAACCTAGTCACCGTCTCCTCA 426

>gb|M34626|MUSIGHACK Mouse Ig rearranged heavy chain (NC19-F8) mRNA VH-DH-JH4

1 CAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACTTGCACTGTCTCGGGTTTCCATTAAACAGCATATGGTGAGACTGGGTTCGCCAGCCT 120
121 CCAGGAAAGGCTCTGGAGTGGCTGGGAGTAATAGGGGTGGTGAAGCAAGTTATAAT 180
181 TCAGCTCTCATGTCCAGACTGAGCATCAGCAAGAACAATCCAAAGCCAAGTTTCTTA 240
241 AAAATGAACACTGTCNAACTGATGACACAGCCATGTACTACTGTGCC 288
289 ----- 299
300 ACGGGGNNYTTACTATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTC 356

>gb|L31403|MUSIGHCVX Mouse immunoglobulin heavy chain variable region (Igh-V)

58 CAGGTGCACCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 117
118 ACTTGCACTGTCTCTGGATTTTCATTAACCACTATGGTGATCACTGGTTTCGCCAGCCT 177
178 CCAGGAAGGGCTCTGGAGTGGCTGGGACATATGGGCTGGGAACACAGATTATAAT 237
238 TCGGCTCTCATGTCCAGACTGAGCATCAACAAGACAACCTCAAGAGCCAAGTTTCTTA 297
298 AAAATGAACACTGCAAGCTGATGACACAGCCATGTACTACTGTGCCAGATT 350
351 ----- 367
368 ACGACTATGCTGTGGACTACTGGGTC AAGGAACCTCAGTCACCGCTCTCCTCA 420